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Sustainable Finance – Global

Sustainable bond issuance on course to hit $950 billion in 2023 despite challenges

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Summary

» **Second-quarter sustainable bond issuance totals $258 billion, reaches 15% of global bond market.** Global issuance of green, social, sustainability and sustainability-linked bonds totaled $258 billion in the second quarter of 2023, flat versus the same period last year and a modest 4% decline from the first quarter of this year. Across the four segments, there were $156 billion of green bonds, $51 billion of social bonds, $40 billion of sustainability bonds and $11 billion of sustainability-linked bonds. Total sustainable bond issuance reached $526 billion in the first half of the year, a 7% increase from the same period last year despite a decline in overall bond issuance. We expect sustainable bond issuance to remain fairly robust during the second half of the year, with the potential for issuance to eclipse our 2023 forecast of $950 billion.

» **Decline in number of debut issuers poses potential constraint on market growth.** Although a decline in new issuers should be expected as the market matures, the drop has become more evident over the past year. While some of the decline may be attributable to market conditions, other more secular factors could be holding back would-be debut issuers, including heightened scrutiny of potential greenwashing and an increasingly complex ESG regulatory and political landscape.

» **Updated ICMA principles reflect continued evolution of sustainable bond market.** During its annual meeting in June to discuss the green, social, sustainability and sustainability-linked bond principles, the International Capital Market Association (ICMA) released updates to its Sustainability-Linked Bond Principles and Social Bond Principles, as well as modifications to other supporting documents.

» **ICMA revises Climate Transition Finance Handbook amid efforts to harmonize decarbonization standards.** ICMA's first update of its Climate Transition Finance Handbook since its initial publication in 2020 represents further recognition of the importance of transition financing. Issuers in carbon-intensive industries are increasingly tapping the sustainable debt market to finance their net-zero ambitions and transform their business strategies to adapt to growing policy and market risks. In the first half of 2023, issuers in carbon-intensive sectors brought $61 billion of sustainable bonds to market, equivalent to 12% of total sustainable bond issuance.

Second-quarter sustainable bond issuance totals $258 billion, reaches 15% of global bond market

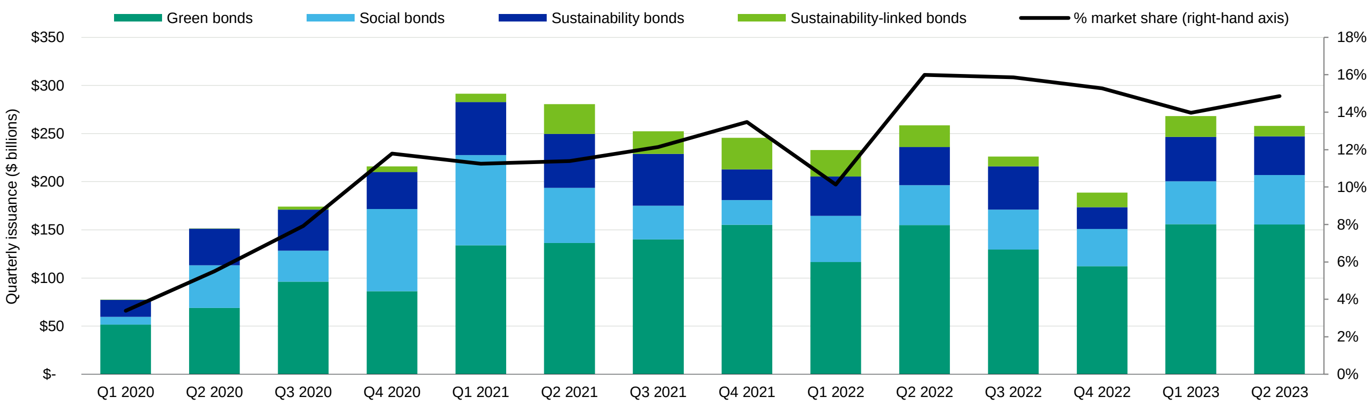
Global issuance of green, social, sustainability and sustainability-linked bonds totaled $258 billion in the second quarter of 2023, flat versus the same period last year and a modest 4% decline from the first quarter of this year (see Exhibit 1). Across the four segments, there were $156 billion of green bonds, $51 billion of social bonds, $40 billion of sustainability bonds and $11 billion of sustainability-linked bonds (SLBs). The combined $258 billion remains short of the quarterly high-water mark of $291 billion in the first quarter of 2021, but represents a substantial increase from last year's cyclical low of $189 billion in the fourth quarter.

Volumes across all four labeled categories totaled $526 billion during the first half of the year, a 7% increase from the $491 billion issued in the first half of 2022 when global debt markets were volatile amid macroeconomic headwinds. We expect fairly robust GSSS bond volumes in the second half of the year, with the potential for issuance to eclipse our $950 billion forecast for all of 2023 (see Sustainable bond issuance to rebound 10% in 2023 to $950 billion, short of record high). However, growth in the second half of the year could be tempered by a drop in the number of first-time sustainable bond issuers, declining issuance in some markets such as the US, and the potential for higher borrowing costs and tighter lending to curtail global macroeconomic growth (see Higher borrowing costs and tighter lending will slow global growth sharply this year).

Exhibit 1

Sustainable bond issuance tempers slightly as green bonds have breakout first half

Quarterly sustainable bond issuance by label and as % share of global bond market



Sources: Moody's Investors Service, Environmental Finance Data and Dealogic

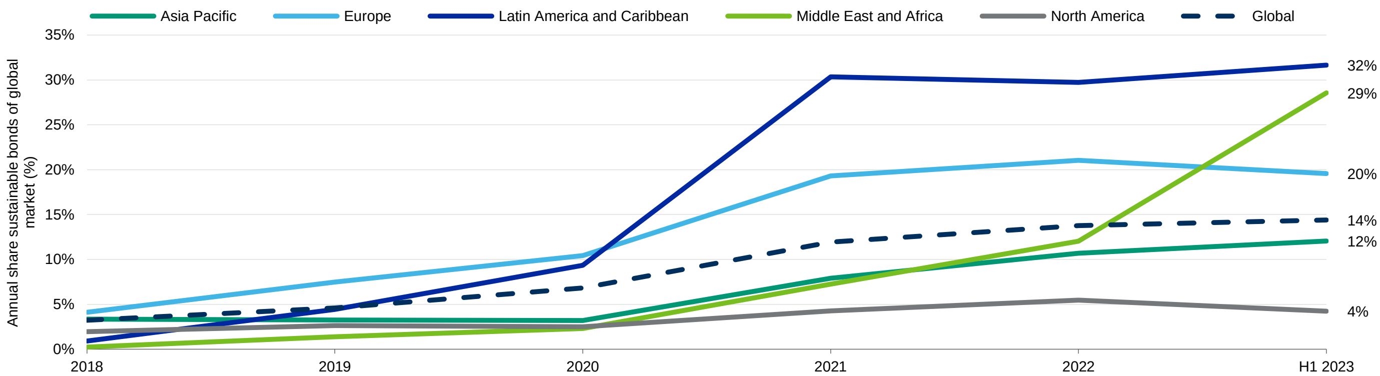
The increase in sustainable bond issuance during the first half of the year came as overall bond issuance fell 7% from the same period in 2022, according to data from Dealogic. GSSS volumes represented 15% of total global issuance in the second quarter of 2023, demonstrating continued resilience in the sustainable bond segment despite relatively challenging market conditions.

Regionally, sustainable bonds' share of overall issuance varied widely (see Exhibit 2). In Europe, which is the largest sustainable bond region in terms of absolute volumes, sustainable bonds have accounted for around 20% of total bond issuance over the past two years. By contrast, sustainable bonds still account for a much smaller share of total issuance in North America, dropping to 4.2% in the first half of 2023 from 5.5% for all of 2022. Meanwhile, sustainable bond shares in the Middle East and Africa and Latin America and the Caribbean moved higher in H1 2023, with the Middle East and Africa in particular increasing to 29% in the first half of the year from just 12% across all of 2022. Performance in these two regions is partly explained by larger deals for sustainable bond issuers amid smaller overall issuance volumes. However, it also underscores the sizeable sustainable investment opportunities in these regions.

Exhibit 2

Sustainable bonds are an increasing feature of most regional bond markets

Annual share of regional sustainable bond volumes of regional bond markets



Sources: Moody's Investors Service, Environmental Finance Data and Dealogic

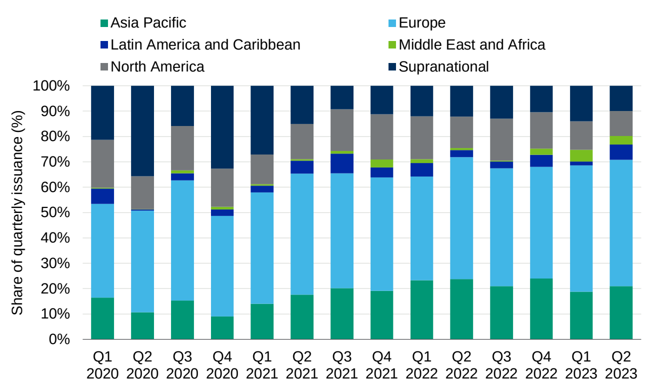
From a regional perspective, European issuers continued to dominate global GSSS bond supply in the second quarter, accounting for $129 billion in issuance and representing half of global volumes (see Exhibit 3). Asia-Pacific volumes totaled $54 billion (21% of global issuance),[1] followed by supranational issuers at $26 billion (10% of global issuance) and North American issuers at $25 billion (10% of global issuance). While most regions have been experiencing growth in terms of absolute sustainable bond volumes, North America stands apart from the broader trend, with $25 billion of issuance in the second quarter representing the region's smallest quarterly total since the second quarter of 2020.

Latin American and Caribbean sustainable bond issuers brought $15 billion to the market in the second quarter of 2023, marking their largest quarterly total since the third quarter of 2021. The second-quarter tally was nearly four times the amount in the first quarter and more than double the volume in the same period of 2022. Middle Eastern and African issuers' volume declined to $9 billion from their quarterly high of $12 billion during the first quarter of the year, representing a 3% market share, but still higher than volumes achieved in past years.

As shown in Exhibit 4, nonfinancial companies represented 27% of sustainable bond issuance in the second quarter, followed by sovereigns with 23% and financial institutions with 20%. Municipal issuance totaled $14 billion, declining from $19 billion in the first quarter.

Exhibit 3

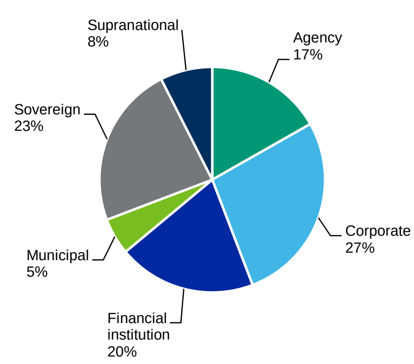
European issuers continue to dominate GSSS bond market while Latin American volumes bounce back



Sources: Moody's Investors Service and Environmental Finance Data

Exhibit 4

Share of global Q2 2023 GSSS issuance by issuer type



Sources: Moody's Investors Service and Environmental Finance Data

Nonfinancial companies accounted for the largest share of issuance during the first half of 2023, led by French utility Engie S.A. (Baa1 stable) with a $4 billion green bond (see Engie S.A Second Party Opinion), Italian energy firm Eni S.p.A.'s (Baa1 negative) $3 billion sustainability-linked bond (see Eni S.p.A. Second Party Opinion) and Israeli pharmaceutical company Teva Pharmaceutical Industries Ltd.'s (Ba2 stable) $2 billion sustainability-linked bond. Engie is one of the largest issuers of green bonds globally, having issued $22 billion cumulatively, while Teva and Eni are the second and third-largest SLB issuers in the market by volume at the end of the second quarter at $7 billion and $4 billion, respectively.

Sovereigns issuing roughly $10 billion or more in the first half of 2023 include Germany (Aaa stable) with $15 billion in green bonds, Italy (Baa3 negative) with $13 billion in green bonds, Hong Kong SAR, China (Aa3 stable) with $12 billion in green bonds and the United Kingdom (Aa3 negative) with $10 billion in green bonds. First-time sovereign issuers in the second quarter of 2023 included Cyprus (Ba1 positive) with a €1 billion sustainability bond and Turkiye (B3 stable) with a $2.5 billion green bond.

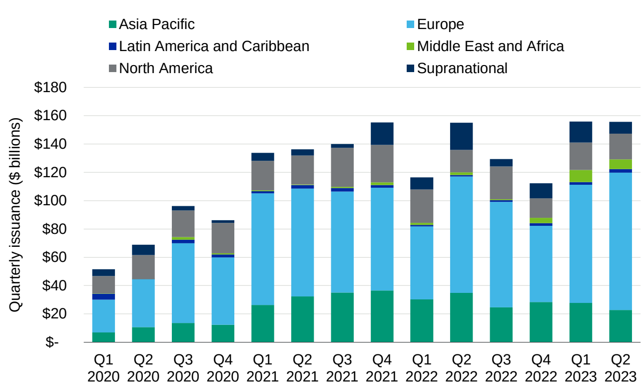
Green bonds maintained peak levels in the second quarter as European issuance surged

Green bond volumes held steady in the second quarter, matching the $156 billion issued in the first quarter (see Exhibit 5). For the first six months of the year, green bond issuance totaled $312 billion, a 15% increase from the same period last year, surpassing the previous half-year record of $295 billion in the second half of 2021. If the trend continues, bolstered by continued focus on the execution of government and corporate net zero plans, green bond issuance could exceed 2021's record total of $565 billion and top our 2023 forecast of $550 billion.

European issuers dominated the green bond market in the second quarter with $97 billion in issuance, accounting for 62% of the global total, the highest quarterly total for any region to date. Europe's first-half total reached $180 billion, accounting for 58% of global green bond issuance during the period, followed by Asia-Pacific and North America with 16% and 12%, respectively. The leading countries in green bond issuance for the first half of the year were Germany (13% of the global total), the US (11%), Italy (8%) and France (7%).

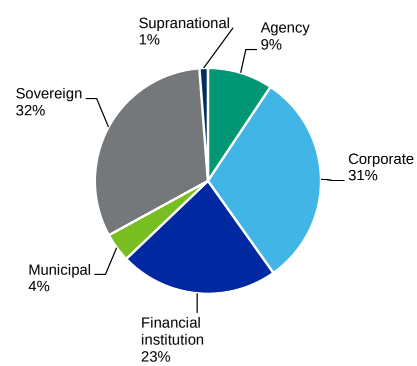
Sovereigns led second-quarter green bond issuance with $49 billion, accounting for 32% of the global total (see Exhibit 6). Nonfinancial companies' green bond issuance totaled $48 billion in the second quarter and $94 billion in the first half of the year. The latter figure was down 8% from the first half of 2022 and was 23% below the peak of $121 billion issued in the first half of 2021. Financial institutions issued $35 billion in the second quarter (23% share), followed by agencies ($15 billion, 9%), municipalities ($6 billion, 4%), and supranationals ($2 billion, 1%). In the first half of 2023, nonfinancial companies led with a 30% share, followed by sovereigns (28%), financial institutions (24%), agencies (8%), supranationals (5%) and municipalities (5%).

Exhibit 5
Global green bond issuance surges in first half of 2023



Sources: Moody's Investors Service and Environmental Finance Data

Exhibit 6
Share of global Q2 2023 green bond issuance by issuer type



Sources: Moody's Investors Service and Environmental Finance Data

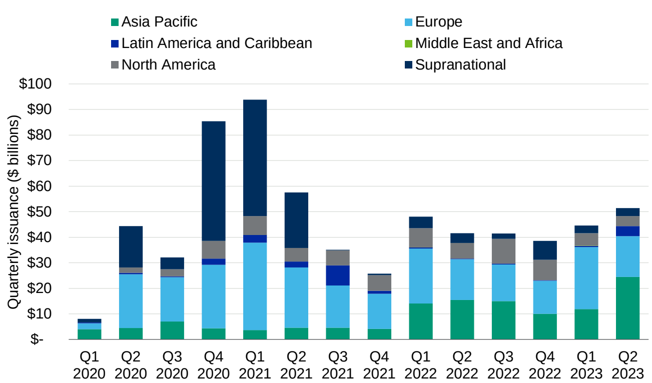
Social bond issuance saw modest growth in the second quarter

Social bond issuance rose to $51 billion in the second quarter of the year, up 15% from $45 billion in the first quarter and up 24% from $42 billion during the same period last year. The first-half total of $96 billion surpasses the halfway mark of our $150 billion full-year forecast. Key agency issuers, including the Korea Housing Finance Corporation (Aa2 stable), Caisse d'Amortissement de la Dette Sociale (CADES) (Aa2 stable) and Japan Expressway Hld. & Debt Repayment Agency (A1 stable), contributed $19 billion in the second quarter. We predict issuance will remain similar in the second half of the year because of the concentrated nature of issuers in this segment and the limited number of issuers with large-scale social projects.

In the first half of 2023, social bond issuance in Europe exceeded $40 billion, accounting for 42% of global social bond issuance (see Exhibit 7). The Asia-Pacific region followed with more than $36 billion, two-thirds of which was issued in the second quarter. North American social bond issuance totaled about $9 billion during the first half, or 9% of the global total, followed by supranationals ($6 billion, 6%) and Latin America and the Caribbean ($4 billion, 5%). Among issuer types, agencies accounted for half of global social bond issuance (see Exhibit 8).

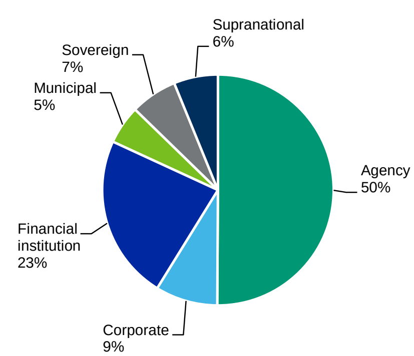
While we expect social bonds to remain a viable option for many sectors, volume growth may be constrained by the limited number of large-scale social projects. However, ICMA's harmonization of social impact metrics and the inclusion of emerging trends such as the "just transition"[2] in its recently updated guidance will support further development of this market and create opportunities for an array of issuers to leverage social bonds as a means to finance transition projects with a social lens.

Exhibit 7
Global social bond issuance uptick in Q2 supported by Asia-Pacific issuers



Sources: Moody's Investors Service and Environmental Finance Data

Exhibit 8
Share of global Q2 2023 social bond issuance by issuer type



Sources: Moody's Investors Service and Environmental Finance Data

Sustainability bond issuance slowed in the second quarter but on track to reach $175 billion by year end

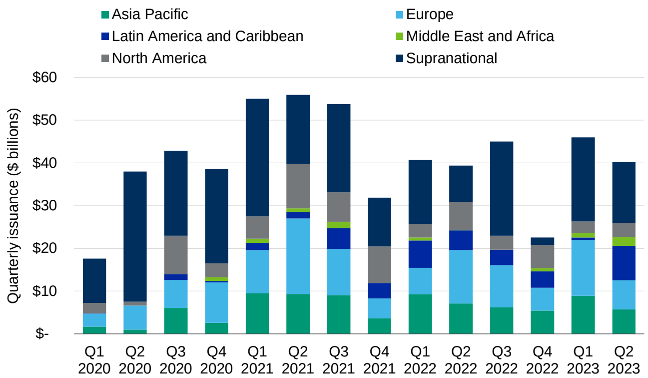
Sustainability bond issuance totaled $40 billion in the second quarter, down 13% from the prior quarter but up 2% from the $39 billion issued in the year-earlier period (see Exhibit 9). Issuance reached $86 billion during the first half of the year, which representing an 8% rise from the same period last year. The ongoing development of regional sustainability standards and global voluntary sustainability disclosure regimes such as the S-1 and S-2 standards from the International Sustainability Standards Board (ISSB) further bolsters the increasing market focus on the interconnected nature of environmental and social risks and the importance of impact measurement. This suggests continued opportunities for issuers to finance both environmental and social projects in line with the UN Sustainable Developments Goals (SDGs). We expect similar issuance volume during the second half and affirm our 2023 forecast of $175 billion in sustainability bond issuance.

Supranational sustainability bond issuance totaled $14 billion in the second quarter. Latin American and Caribbean issuers contributed $8 billion, making up 20% of the total, partly due to sovereign sustainability bond issuances from Mexico (Baa2 stable) (see Government of Mexico Second Party Opinion) and Peru (Baa1 negative) (see Exhibit 9). Through the first six months of the year, supranational issuers led with $34 billion (39% of the global total), followed by Europe ($20 billion, 23%), Asia-Pacific ($15 billion, 17%), Latin America and the Caribbean ($9 billion, 10%), North America ($6 billion, 7%) and the Middle East and Africa ($3 billion, 4%).

Sustainability bond issuance has been somewhat concentrated by issuer type, with supranationals accounting for more than a third of second-quarter issuance (Exhibit 10). Sovereigns and nonfinancial companies each accounted for $7 billion in issuance in the second quarter, representing a combined 36%. Financial institutions accounted for the most notable decline in the second quarter, with issuance reaching just short of $4 billion, declining sharply from more than $9 billion in the first quarter of the year. Municipal issuers brought $4 billion to market in the second quarter, just below the $5 billion during the previous three months.

Exhibit 9

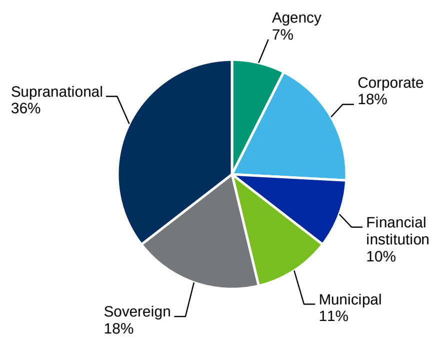
Sustainability bond volumes moderate in the second quarter of 2023



Sources: Moody's Investors Service and Environmental Finance Data

Exhibit 10

Share of global Q2 2023 sustainability bond issuance by issuer type



Sources: Moody's Investors Service and Environmental Finance Data

Sustainability-linked bond volumes continue to cool amid market scrutiny

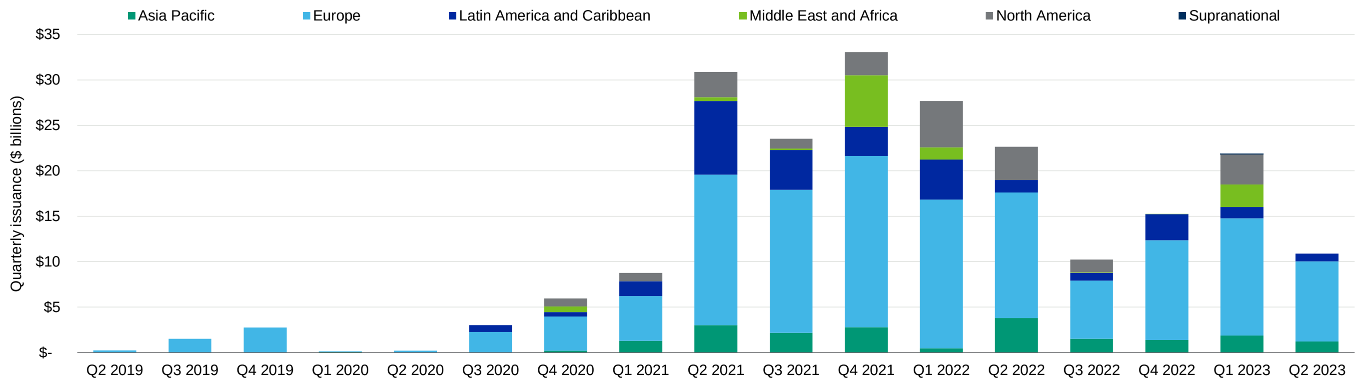
Sustainability-linked bond (SLB) volumes dropped to under $11 billion in the second quarter, a 50% decrease from the prior quarter (see Exhibit 11). This decline likely reflects increased investor scrutiny and heightened expectations for robust and meaningful structures, including ambitious targets and material financial penalties. Another contributing factor may be relatively weak high-yield issuance in the broader bond market, a particular challenge for SLBs given higher shares of high-yield issuers in the earlier days of this market segment. Despite the quarter-on-quarter decline, issuance during the first half of the year surged 28% from the second half of 2022. Issuance volumes for the first half of the year totaled $33 billion, slightly below the halfway point of our full-year forecast of $75 billion.

The market remains heavily concentrated in Europe, with the region accounting for two-thirds of issuance by volume during the first half of the year. In fact, no SLB issuances came from North American, Middle Eastern and African or supranational issuers during the second quarter. SLBs similarly remain heavily concentrated by issuer type, with nonfinancial companies accounting for 94% of volume since the SLB market's inception.

This year, ICMA updated its guidance to enhance the meaningfulness and usability of the SLB structure for various issuers. The updated guidance includes considerations for sovereign SLBs and updates to the illustrative KPI registry with sovereign, social and just transition indicators, encouraging a more diverse range of projects from potential SLB issuers. We anticipate a gradual broadening of SLBs in terms of issuer type and KPIs moving forward, which could support modest growth in volumes in coming quarters.

Exhibit 11

Sustainability-linked bond volumes continue to cool with certain regions absent from the market
Quarterly global sustainability-linked bond volumes by region ($ billions)



Sources: Moody's Investors Service and Environmental Finance Data

Decline in number of debut issuers poses potential constraint on market growth

The number of first-time sustainable bond issuers coming to market has been falling in recent quarters, which could pose a potential constraint on market growth. Following a surge in first-time sustainable bond issuers in the first and second quarters of 2021, when there was a global average of 77 debut sustainable bond issuers per month, the trend has reversed. New global first-time sustainable bond issuers totaled 51 average issuers per month throughout 2022, and the figure has fallen to 29 average issuers per month in the first half of 2023.

Although a decline in new issuers should be expected as the market matures, the drop has become more evident over the past year. While some of the decline may be attributable to broader issuance conditions, other more secular factors could be holding back would-be debut issuers, including heightened scrutiny of potential greenwashing and an increasingly complex ESG regulatory and political landscape. However, we note these factors likely vary across region and sector.

From a regional perspective, all core markets – including Europe, Asia-Pacific and North America – saw a surge in debut issuers during the middle quarters of 2021 (see Exhibit 12). As macroeconomic challenges began to emerge in the beginning of 2022 and stymied many would-be new issuers from accessing the sustainable bond market, regional differences began to emerge. For example, the drop off in new issuers was more pronounced in Europe and North America than Asia-Pacific, likely a result of rising interest rates in the US and EU, high inflation and economic uncertainty stemming from the Russian invasion of Ukraine and rising energy prices in Europe. As interest rate cycles potentially moderate, however, a gradually more conducive environment could emerge and support a rebound in first-time issuers in Europe and North America.

Notably, the number of first-time issuers in Asia-Pacific has remained similar to Europe in recent months, despite volumes in this region accounting for a fraction of those in Europe. We expect this trend will continue as sustainable financing needs remain significant in the Asia-Pacific region and more issuers opt for labeled bonds to support their carbon transition financing plans.

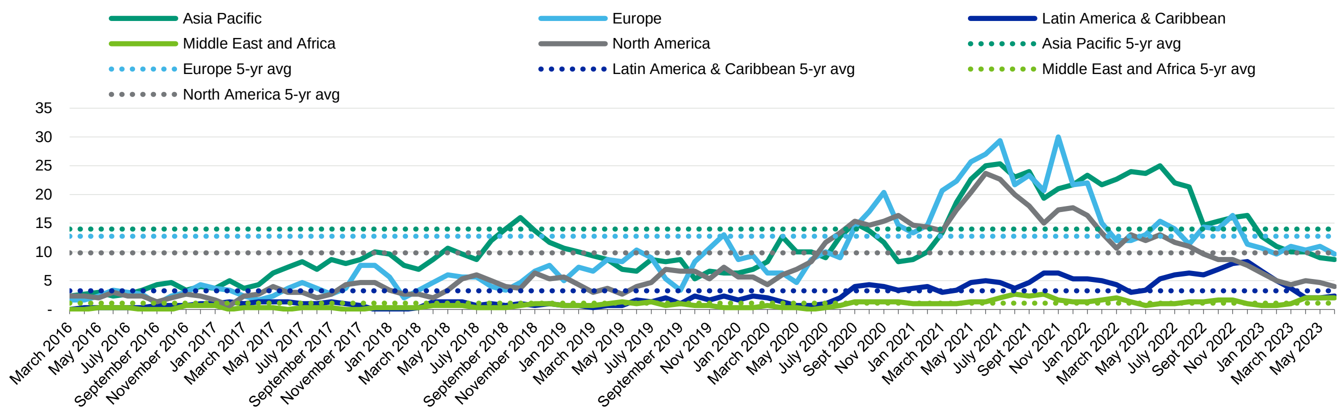
Another notable bright spot for first-time sustainable bond issuance has come from emerging market issuers in Latin America and the Caribbean and the Middle East and Africa, reflecting the more untapped nature of sustainable bonds in these markets. In the fourth quarter of 2022, for example, new issuers from Latin America and the Caribbean made a strong entry into the market, with nonfinancial companies in the renewable energy sector accounting for one-fifth of these new issuers. As issuers in this region increasingly focus on sustainable development, we anticipate a rebound in first-time sustainable bond issuers.

The Middle East and Africa similarly experienced a notable influx of new issuers in the first half of this year, largely due to the debut of sovereigns in the region, such as Saudi Arabia and the United Arab Emirates. Issuers in hydrocarbon-reliant countries in the region, such as Saudi Arabia and Bahrain, will continue to diversify their spending to enhance economic resilience, supporting continued growth in debut sustainable bond issuers.

Exhibit 12

First-time issuers in core sustainable bond regions have fallen in recent months

Number of first-time sustainable bond issuers and five-year average number of issuers by region (three-month moving average)



We calculated regional five-year long-term average of new issuers from July 2018 to June 2023 and then measured each issuing segments' three-month moving average of new issuers, on a monthly basis

Sources: Moody's Investors Service and Environmental Finance Data

From a sectoral perspective, nonfinancial companies primarily drove the surge in the number of first-time sustainable bond issuers during the middle of 2021. This coincided with high quarterly volumes in the broader sustainable bond market that occurred in a favorable financial environment with historically low financing costs and relatively low inflation. After the start of 2022, however, this trend began to reverse, with the number of nonfinancial companies debuting in the sustainable bond market shrinking dramatically. This trend has likely been the result of a more challenging issuance environmental generally, as well as the challenges that corporate issuers – in particular – face in terms of heightened scrutiny of greenwashing and shifts in the ESG regulatory and political landscape. Although challenging market conditions may abate, the broader scrutiny around greenwashing and complex environment for corporates will likely endure, potentially tempering a rebound in corporate debut sustainable bond issuers in the coming quarters.

Updated ICMA principles reflect continued evolution of sustainable bond market

During its annual meeting in June to discuss its green, social, sustainability and sustainability-linked bond principles, ICMA released updates to its Sustainability-Linked Bond Principles (SLBP) and Social Bond Principles (SBP), as well as modifications to other supporting documents.

While the core tenets of the SLBP remain unchanged, modifications were made to accommodate sovereign and sub-sovereign issuers. For instance, the language regarding the selection of key performance indicators (KPIs) within the SLBP has been altered to incorporate KPIs that are more relevant to sovereign entities, such as those linked to national sustainable development policies. These changes reflect recognition of the growth potential of sovereign SLB issuance following debut issuances from Chile (A2 stable) and Uruguay (Baa2 positive). Modifications were also made to the illustrative KPI registry to address a broader range of social considerations, such as just transition and supply chain issues. This reflects the anticipated diversification of SLB KPIs toward social issues over time.

The new version of the SBP formalizes best practices already prevalent in the market, including the clarification of requirements for target populations and the introduction of the concept of "just transition," along with related metrics. In addition to these updates, refinements have been made to SBP supporting documents with the aim of harmonizing the collection of SBP-related information.

Other updates focus primarily on supporting documents to align with the latest developments in the sustainable bond market. For instance, the handbook on impact reporting has been updated to provide further guidance on existing core recommendations, introduce a new core recommendation on reporting risks related to the potential negative effects of projects, and update impact reporting metrics for renewable energy and energy efficiency. Other modifications include an updated high-level mapping to the United Nations' Sustainable Development Goals, as well as additions and revisions to a Q&A document about secured sustainable bonds.

ICMA revises Climate Transition Finance Handbook amid efforts to harmonize decarbonization standards

ICMA also released an update to its Climate Transition Finance Handbook (CTFH) during its annual principles meeting, the first such update since the handbook was published in 2020. The CTFH update comes at a time when global harmonization of decarbonization metrics and outcomes remains a focal point of discussion in the sustainable bond market. Various collective efforts, such as Science Based Targets Initiative (SBTi) and Transition Pathway Initiative (TPI), provide pathways for companies in carbon-intensive sectors to decarbonize in line with the Paris Agreement.

The new version of the CTFH contains updates across its four key elements: (1) issuer's climate transition strategy and governance; (2) business model environmental materiality; (3) climate transition strategy's use of science-based targets; and (4) implementation transparency. The updates include the addition of new annexes with illustrative disclosures, infographics and a list of wider market and official sector guidance for climate-themed bonds. In addition, the CTFH is now more explicit about the need for issuers to include scope 3 emissions in their reporting where material.

While the CTFH still focuses on channeling transition finance through existing labels, including use-of-proceeds green bonds, sustainability bonds and SLBs, the updated version also highlights how issuance of dedicated transition bonds is increasing in certain jurisdictions. Issuers in a handful of Asia-Pacific countries, such as Japan, will continue to bring transition bonds to market, but we expect most transition financing to still come from globally well-established labeled bonds such as green bonds, sustainability bonds and SLBs.

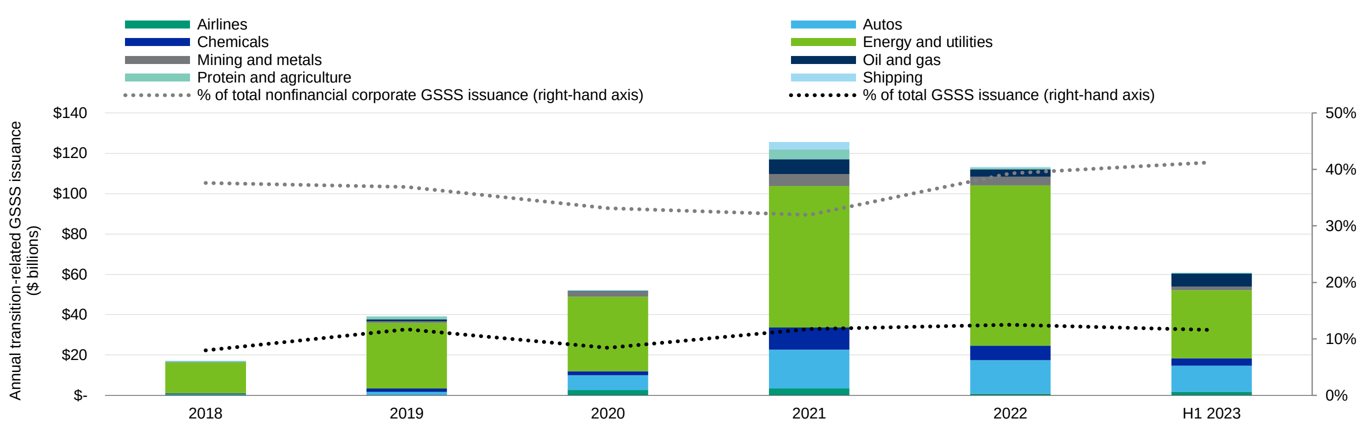
Issuers in carbon-intensive industries are increasingly tapping the sustainable debt market to finance their net-zero ambitions and transform their business strategies to adapt to growing policy and market risks. During the first six months of the year, sustainable bond issuance among companies in carbon-intensive sectors, such as airlines, electric utilities, oil and gas, metals and mining, automotive manufacturing and shipping, reached $61 billion, accounting for 12% of total sustainable bond issuance and 41% of sustainable bond issuance from nonfinancial companies (see Exhibit 13). In our most recent environmental risk heat map, we identified these sectors as having very high or high inherent exposure to carbon transition risk (see Sectors with heightened credit risk account for twice as much debt as in 2015). To put this in context, sectors with elevated transition risk carried a total of $4.9 trillion in rated debt as of June 2022.

Although sustainable bonds from these sectors have tended to account for about 15% of issuance annually, we expect this share to grow as pressure mounts to demonstrate progress in reducing greenhouse gas emissions in the run-up to this year's UN Climate Change Conference (COP28), when the first global stocktake on climate action is scheduled to conclude.

Exhibit 13

Carbon-intensive sectors accounted for 41% of nonfinancial corporate sustainable bond issuance during the first half of 2023

Annual sustainable bond issuance by carbon-intensive sectors



Sources: Moody's Investors Service and Environmental Finance Data

Appendix 1: Types of sustainable debt instruments

Throughout this report, we refer to a variety of sustainable debt instruments. These include: use-of-proceeds green bonds, social bonds and sustainability bonds, whose proceeds are typically earmarked to finance specific eligible environmental and/or social projects; and sustainability-linked bonds, whose proceeds can typically be used for general corporate purposes but whose interest rates are tied to the achievement of various sustainability targets. These instruments include:

» **Green bonds:** Bonds where the proceeds will be exclusively applied to finance or refinance new and/or existing eligible green projects, such as renewable energy, energy efficiency, clean transportation, sustainable water management and green buildings. Typically issued in accordance with the Green Bond Principles.

» **Social bonds:** Bonds where the proceeds will be exclusively applied to finance or refinance new and/or existing eligible social projects, such as affordable basic infrastructure, access to essential services, affordable housing and food security. Typically issued in accordance with the Social Bond Principles.

» **Sustainability bonds:** Bonds where the proceeds will be exclusively applied to finance or refinance a combination of new and/or existing eligible green and social projects. Typically issued in accordance with the Sustainability Bond Guidelines.

» **Sustainability-linked bonds:** Bonds that incentivize the issuer's achievement of material, quantitative, predetermined, ambitious, regularly monitored and externally verified sustainability objectives through key performance indicators and sustainability performance targets. Typically issued in accordance with the Sustainability-Linked Bond Principles.

Note on our sources

Our primary source for sustainable debt data throughout this report is Environmental Finance Data (data downloaded on 10 July 2023). Environmental Finance Data categorizes each issuer as one of six types: corporate, financial institutions, sovereign, government agency or supranational. Financial institutions include banks and asset managers; agency refers to government agency-affiliated companies; and sovereign issuers are sovereign governments. Refer to Environmental Finance Data's methodology for more information on how it collects data on sustainable bonds.

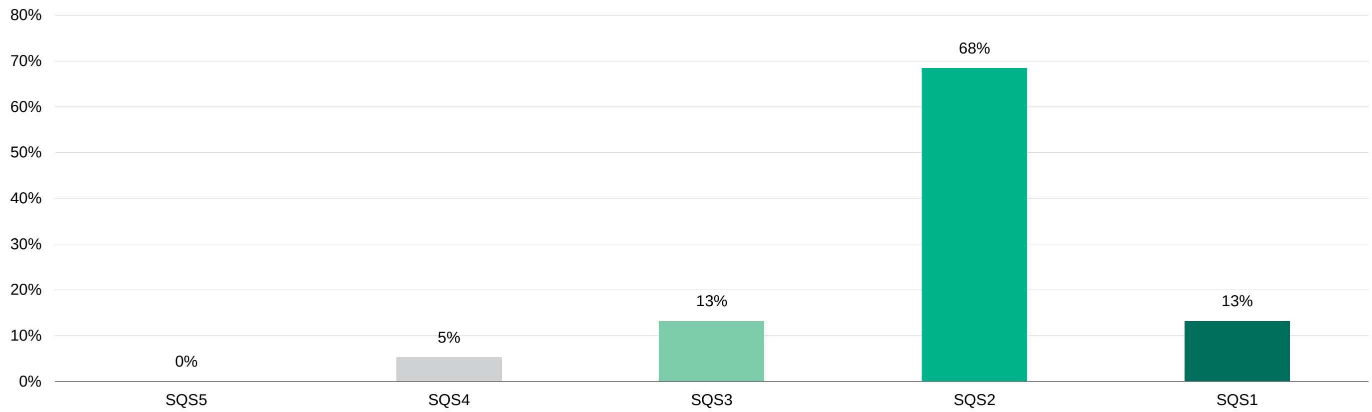
Appendix 2: Second Party Opinion portfolio summary

In October 2022, Moody's Investors Service (MIS) published an assessment framework for providing Second Party Opinions (SPOs) on sustainable debt. The framework describes how we provide SPOs on green-, social- and sustainability-labeled financial instruments (e.g., bonds or loans) or financing frameworks that follow either a use-of-proceeds or sustainability-linked approach. Our SPOs and their underlying scores reflect point-in-time analyses that can be updated upon request by the issuer. They are not credit ratings. They are intended to provide an additional tool for market participants to use in conducting their own analysis.

Our SPOs assign an overall sustainability quality score (SQS) that combines an alignment with principles score and a contribution to sustainability score to indicate our opinion of the overall sustainability quality of a financial instrument or financing framework. This overall score is expressed on a five-point scale ranging from SQS1 (excellent) to SQS5 (weak).

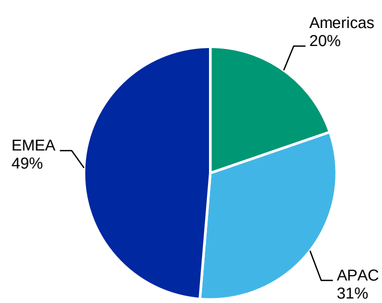
Exhibit 14 shows the distribution of our sustainability quality scores to date, while Exhibits 15 and 16 show the distribution of our SPOs by region and market segment. Click here to access all our publicly released SPOs.

Exhibit 14
Two-thirds of our SPOs resulted in a score of SQS2, which indicates very good quality
Distribution of MIS Second Party Opinions by sustainability quality score



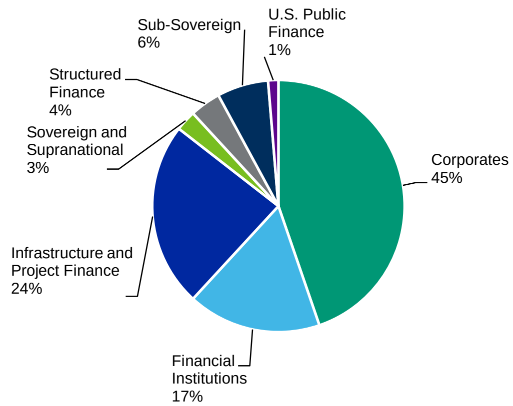
Data as of 21 July 2023. Includes both public and private SPOs.
Source: Moody's Investors Service

Exhibit 15
Nearly half of our SPOs have been for EMEA-based issuers
Distribution of MIS Second Party Opinions by region



Data as of 21 July 2023. Includes both public and private SPOs.
Source: Moody's Investors Service

Exhibit 16
Nonfinancial companies have accounted for the largest share of SPOs
Distribution of MIS Second Party Opinions by market segment



Data as of 21 July 2023. Includes both public and private SPOs.
Source: Moody's Investors Service

Endnotes

1 Along with other sustainable bond data referenced in this report, Asia-Pacific volumes come directly from Environmental Finance Data. These data may not fully capture significant volumes of sustainable bonds issued in domestic capital markets, such as onshore sustainable bond issuance in China.

2 A "just transition" seeks to maximize the socioeconomic benefits of decarbonization, while minimizing the impact on those negatively affected (see Sovereigns' readiness for a "just transition" varies, as does associated credit impact).

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